

Overview

P-20 Online Assessment Planning

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Kentucky Department of Education Online Assessment Program

The use of technology-enabled programs to deliver, score and return assessment results in K12 education has matured to the point where broad-scale adoption is appropriate. The full benefit of online assessment lies not only in the efficient delivery of a test but more importantly in the learning adjustments that can be made once an educator quickly and accurately determines what a student knows and what content students have yet to master. This type of change requires a combination of software programs, robust infrastructure, substantive modifications to the way teachers teach and prepare to teach and changes to all organizations involved. Perhaps as much as other changes in recent memory, broad adoption of online assessments will truly integrate teaching, learning and assessment into a cohesive and aligned process.

The Kentucky Board of Education (KBE) has provided guidance to the Kentucky Department of Education (KDE) to move forward as quickly as feasible to assess students in an online environment to accomplish the instructional goals described above. KBE is supportive of the No Child Left Behind Act of 2001 (NCLB) that requires student proficiency in reading and mathematics by the year 2014 and KBE views online assessments as another critical tool for schools to meet the 2014 requirement. KDE recognizes that to successfully implement requisites of Senate Bill 130, an act relating to educational assessment and accountability, and House Bill 197, an act relating to end-of-course examinations, to meet student scoring and reporting deadlines, students shall take the assessments in an online setting.

Scope of work

Kentucky's first widespread use of online assessment provided accommodations for special populations during the Commonwealth Accountability Testing System (CATS) assessment. However, the scope of the online assessment project is much broader than CATS Online for special populations. It is composed of several subprojects (brief description of each contained in Attachment A).

The subprojects KDE is pursuing in the near term include:

- CATS Special Population Accommodations Spring 2008 and beyond
- CATS General Population Pilot Spring 2008
- End of Course Algebra II Pilot October 2007 and February 2008
- WorkKeys (ACT, Inc) 2007-2008 school year
- World Languages STAMP test (MS & HS) * May 2007

The subprojects planned for future consideration include:

- End of Course Algebra II 2008-2009
- NAEP – National Assessment for Educational Progress – Writing Grades 8 and 12 2011
- End of Course Algebra I and Geometry TBD
- Kentucky Occupational Skill Standards Assessment System KOSSA Online * TBD
- CATS General Population Spring 2009

- National Norm Referenced Test (elementary) 2008-2009 school year (Tentative)
- EPAS (ACT, Inc – EXPLORE, PLAN and ACT) TBD
- World Languages Noella test (ES) * TBD
- Limited English Proficiency TBD
- KCCT Special Populations Additional Enhancements TBD
- Additional End of Course assessments at the high school level TBD

In addition to the tests listed above which present “static” test formats, the following tests require “dynamic” test generation and are also expected to be widely implemented in the long term:

- Formative Assessments (Teacher/ Classroom) * TBD
- Interim Assessments (school/ district wide assessments) * TBD

** Note: These assessments are considered best practice and critical to measuring the results of the instructional process but are not currently a part of Kentucky’s assessment formula.*

Platform

Kentucky shall develop a system utilizing hardware, software and broadband interconnection to allow KDE and assessment contractors to house online applications at the district level. The hardware and network connections will remain under the control of KDE and shall meet all Kentucky hardware, operating and application software, and security standards. The online platform will allow for users and vendors to input test items to create tests, score tests and report test results. For vendors who have proprietary test systems that must be administered by statute, rights will be granted to a slice of each district server for their application. These applications will still need to meet Kentucky security standards.

This approach involves placing servers maintained at the state level in each district. The platform shall be designed for a secure environment permitting student testing at the school level and forward of response to the district location and to the testing vendor when needed in a secure environment without the possibility of loss of data. The platform shall support a variety of item types including multiple choice and open (constructed) responses and provide flexibility to support video and audio item types and branching questions. The application shall provide a common student tool kit including but not limited to rulers, protractors, calculators, drawing tools. In support of special population students, the application will utilize assistive technologies. The platform shall permit the use of a variety of technologies, not just PC’s and Mac’s.

Online Assessment Program

ATTACHMENT A

CATS General Population

The Commonwealth Accountability Testing System (CATS) is designed to improve teaching and student learning in Kentucky. CATS includes the Kentucky Core Content Test (KCCT), nationally norm-referenced tests, writing portfolios and prompts and the alternate assessment for students with severe to profound disabilities.

KCCT Assessments

Grade	Reading	Mathematics	Science	Social Studies	Arts & Humanities	Practical Living/ Vocational Studies	On-Demand Writing
3 (eop)	X	X					
4	X	X	X			X	
5	X	X		X	X		X
6	X	X					
7	X	X	X			X	
8	X	X		X	X		X
10	X					X	
11		X	X	X	X		
12							X

The goal is to offer all KCCT Assessment components to general population students by the school year 2011-2012.

CATS General Population Pilot

The KDE plans to conduct pilots to assure school and student readiness to complete the CATS assessment online. Plans for the Spring 2008 pilot are under way. KDE plans to administer the pilot to a limited number of students in chosen content areas and a select number of grades.

CATS Online Special Populations

The CATS Online assessment is available to special population students as an accommodation. It provides eligible students with disabilities or limited English proficiency (LEP) a way to take all portions of the Kentucky Core Content Test online. Students are tested in reading, mathematics, science, social studies, arts & humanities, practical living/vocational studies and on-demand

writing at grades 3 (end of primary) through 8 and high grades 10-11. The test is comprised of multiple choice, open response (constructed response) questions and a writing sample.

In Kentucky, special populations participate fully in the state assessment and accountability program. Many of these students would be unable to participate in the assessment without special accommodations such as personal readers, scribes (writers), extended time, paraphrasing, use of special technology and equipment, interpreters, etc.

It is important to understand that an accommodation does not change the content or difficulty of the test; it reduces the effect of the disability and allows the students to show their knowledge and skills.

In the past, approximately 40% of students with disabilities in Kentucky have required personal readers to assist them in taking statewide tests. Over the last few years, Kentucky has greatly reduced the number of students requiring adult assistance by introducing computerized reading supports known as textreaders.

A textreader is text-to-speech software that allows students to read independently by using the computer to read the text aloud. The textreader software has additional features such as word prediction, speaking spell checker, dictionary, speech maker, scientific calculator, pronunciation tutor, and others.

Approximately 1,300 schools in Kentucky now have this technology and teachers are making frequent use of it in their classroom instruction for all students.

The students use their mouse or keyboard to select the text they need to read, and the computer reads the test to the student (via headphones). Students can control navigation of the test questions and independently read at their own pace anything they cannot read without assistance.

Use of this technology has greatly improved students' ability to overcome their disability and gain access to the general education curriculum by providing another way to access and understand print materials.

The questions and student expectations for online assessment are the same as for all other students taking the test with pencil and paper. However, online testing requires planning for technical support in the event a student has a need for assistance in use of the technology. This support is critical since student responses for the CATS Online Assessment will be submitted electronically and will count toward the school accountability index scores.

End of Course Algebra II

Kentucky recently entered a large-scale assessment partnership with nine states to jointly implement Algebra II End Of Course (EOC) through the American Diploma Project (ADP). House Bill 179 requires that the Kentucky Department of Education begin developing

standardized end-of-course examinations in Algebra I, Algebra II and Geometry and pilot the tests at the end of the 2007-2008 academic year.

The Algebra II assessment will be developed in time for Kentucky schools to administer the assessment to Kentucky schools in Spring 2008. Kentucky's first administration will be paper and pencil with the expectation of online versions in school year 2008-2009.

End of Course Algebra II Pilot

Kentucky is participating in the online Algebra II EOC assessment pilot that is happening October 2007 and February 2008.

End of Course Algebra I and Geometry

The Kentucky Department of Education has issued an RFP for development of End of Course assessments for Algebra I and Geometry. Refer to End of Course Algebra II and End of Course Algebra II Pilot for details.

EPAS – Educational Planning and Assessment System

ACT Inc's, EPAS[®] Educational Planning and Assessment System is a system developed in response to the need for all students to be prepared for high school and the transitions they make after graduation.

EPAS focuses on a number of key transition points that young people face:

- EXPLORE grade 8 - Preparing for high school studies
- PLAN grade 10 - Planning and preparing for college and the workplace
- ACT grade 11 – College preparedness and being ready for life after high school

The administration of EXPLORE, PLAN and ACT are mandated in Senate Bill 130.

EPAS is unique in that its programs can be mixed and matched in ways that meet the needs of individual schools, districts, or states. However, each program includes the four components that form the foundation of EPAS:

- Student Planning - Process through which students can identify career and educational goals early and then pursue those goals.
- Instructional Support - Support materials and services to help classroom teachers prepare their students for the coming transitions. This component reinforces the direct link between the content and skills measured in the EPAS programs and those that are taught in high school classrooms.
- Assessment - Student achievement is assessed at three key transition points in EPAS so that academic progress can be monitored to ensure that each student is prepared to reach his/her post-high school goals.

- Evaluation - An academic information monitoring service that provides teachers and administrators with a comprehensive analysis of academic growth between EPAS levels.

Currently ACT, Inc. offers these assessments in paper and pencil. ACT, Inc. has efforts underway to offer EXPLORE and PLAN as online assessments. Availability, costs and assessment considerations for a statewide administration have not been announced.

Formative Assessments (Teacher/Classroom)

Formative Assessment is a process used by teachers and students during instruction that provides feedback to adjust ongoing teaching and learning to improve students' achievement of intended instructional outcomes.

Interim Assessments (school/district wide assessments)

There are many forms of interim assessments currently available, often labeled "benchmark", "formative", diagnostic", or "predictive".

Assessments administered during instruction to evaluate students' knowledge and skills relative to a specific set of academic goals in order to inform policy maker or educator decisions at the classroom, school, or district level. The specific interim assessment designs are driven by the purpose and intended uses, but the results of any interim assessment must be reported in a manner allowing aggregation across students, occasions, or concepts.

KOSSA – Kentucky Occupational Skill Standards Assessment System

KOSSA consists of assessments in nineteen career and technical areas. High school students, primarily juniors and seniors, can elect to take one or more of these assessments. Students passing the assessment receive a Kentucky Occupational Skill Standards Certificate widely recognized by business, industry, and postsecondary educational institutions. For more information on KOSSA Online

NAEP – – National Assessment for Educational Progress – Writing Grades 8 and 12

Starting in 2011, the National Assessment of Educational Progress will test how well students in grades 8 and 12 can write on computers, rather than with the old schoolhouse standbys of pencils and paper. The NAEP writing assessment, given to a nationally representative sample of students, will ask test-takers to respond to two 30-minute writing tasks in grades 8 and 12. The assessments will evaluate students' ability to achieve three common purposes for writing in school and in the workplace: to persuade, to explain, and to convey experience.

NRT - National Norm Referenced Test

The Kentucky Board of Education is considering a plan to reinstitute a standardized administration of a National Norm Referenced Test (NRT) at the elementary grade levels. The first administration for inclusion in school accountability may be in school year 2008-2009. A national norm referenced test allows comparisons between the performance of Kentucky students and the performance of students across the country.

WorkKeys

The WorkKeys is a job skill assessment system is used in high schools and community and technical colleges across the country to measure real-world skills. WorkKeys consists of a battery of assessments. As prescribed in Senate Bill 130 students in grades 10, 11 and 12 may take the WorkKeys assessments in reading for information, locating information and applied mathematics paid for the Kentucky Department of Education. Starting in fall 2007, students can take the paper and pencil version of the WorkKeys assessment and KDE wishes to offer, in a limited way, the online version with future administrations shifting from paper and pencil to the online assessments.

World Language Assessment and World Languages Noella test (ES)

KDE is piloting online testing of level II foreign language classes in pilot online testing of level II foreign language classes using a Standards-Based Measurement of Proficiency or STAMP. The adaptive test developed by Language Learning Solutions consists of three tests and which assess students' proficiency in speaking, reading and writing. Kentucky is also piloting Language Learning Solutions elementary tests in French, Spanish and Chinese, called the NOELLA (National Online Elementary Language Learning Assessment).

Overview of Online Testing and Assessment in Postsecondary Education in Kentucky

This overview of online testing and assessment in postsecondary education in Kentucky reflects the wide variety of institutional testing and assessment functions employed throughout the system. The Kentucky Council on Postsecondary Education, unlike the Kentucky Department of Education, does not have direct responsibility for student assessment. However, documented student learning outcomes is a significant part of the postsecondary education accountability system and individual colleges and universities have already begun developing assessment systems to monitor student learning outcomes for institutional improvement.

Multiple assessment needs and readiness to launch initiatives have resulted in multiple assessment techniques with supporting technologies. Assessment in postsecondary education is driven by regional accreditation of institutions, program reviews, discipline association certification, Kentucky's key indicators of accountability and Kentucky's administrative regulation for mandatory assessment and placement of incoming students. Currently the majority of testing and assessment is not conducted online.

Responsibilities and oversight of assessment are largely decentralized among departments and academic support units within institutions. However, all institutions, and the KCTCS system, have a central administrative unit for collecting assessment results, providing technical support for assessment throughout the institution, and have the primary responsibility for assessment functions that support regional accreditation.

The following examples illustrate different levels of responsibility for common postsecondary assessments:

- Institutional level: KCTCS: Placement testing, conducted primarily using COMPASS, is managed by an assessment center that may be located within academic affairs, student affairs or workforce development. The advantage of COMPASS is that scores can be downloaded directly into PeopleSoft. COMPASS is also available for online administration.
- State level: The Statewide Math Placement Testing Group is piloting an online Math placement test.
- Course level: KCTCS and UK: Decisions about online testing at the course level are made typically by the instructor and increasingly by a department. Decisions may include use of a nationally-recognized exam (e.g., Nursing's NCLEX practice test; Dentistry's use of ExamMaster to prepare students for national boards), a test constructed via an item bank provided by a widely used publisher (e.g., information technology's SAM), or homegrown by a department (e.g., Math department college algebra final exam).
- Institutional level: UK: At the university level, some aspects of assessment of General Education learning outcomes, using commercial exams may require online administration (e.g. Rand's Collegiate Learning Appraisal).

Online testing and assessment are not synonymous in higher education. Assessment in the higher education context refers to a wide range of direct and indirect strategies that include student testing. For example, the use of the National Survey of Student Engagement (NSSE) is widely used and can be administered online or by paper. The NSSE is an indirect assessment that provides a profile of students to examine important campus questions about program quality and learning effectiveness.

In addition to distinguishing testing from assessment it is helpful to distinguish assessment from reporting. The reporting of assessment data (i.e. results and use of results for improvements), collected either through traditional means or online, is an important aspect of the state's assessment agenda.

A variety of assessments, conducted across the college or university, depend on the goal and level of education as illustrated in the following examples:

- KCTCS: Course placement and diagnostic data (when used) for entering students are recorded in their PeopleSoft student record. Because all KCTCS institutions use PeopleSoft, and the student has a unique identifier, the record is accessible across all colleges and stays with the student.
- UK: Test score information is collected and maintained in the institution's central student information management system, SAP. Individual colleges are investigating and investing in assessment database management systems that can link with SAP's Campus Management module.
- KCTCS and UK: Increasing numbers of disciplines require demonstration of competencies via multiple assessments throughout the student's academic work or at the conclusion (e.g. teacher education, engineering, nursing). These program-based assessments are typically driven by program accreditation standards and requirements.
- The Council on Postsecondary Education: Requires reporting of aggregated student engagement survey scores from each public four-year university as part of the Key Indicators of Progress in Postsecondary reform.
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A table of selected software identified to support assessment and/or reporting of assessment table is attached to illustrate the range of products available in the marketplace. While this table includes a variety of products that are current assessment vendors in the higher education market (e.g. Blackboard, Tk20, TaskStream) including some of which are mega systems and others are niche tools with advanced features (e. g. LXR or Perception Questionmark for test development and implementation), this list is not exhaustive.

A Selection of Higher Education Assessment Vendors

Company	Features/Products	Reporting	Conducting Assessment	Weblinks
Academic Management Systems	Curriculum Analysis Tools (CATS), CoursEval, eCV	X	X	http://www.academicmanagement.com/index.asp?app=%20
Advanced Informatics	E*Value, PxDxCaselogger, E*gme, MyFolio	X	X	http://www.advancedinformatics.com/products/
Blackboard	Blackboard Outcomes	X	X	http://www.blackboard.com/products/academic_suite/outcomes_system
Chalk & Wire	EPortfolio2, CWReporter, CWReporter Plus	X	X	www.chalkandwire.com
CoursEval	Teacher Course Evaluation systems	X	X	http://www.academicmanagement.com/index.asp?app=cou
Digital Measures	Assessment database and survey options	X		http://www.digitalmeasures.com/
Edumetry	Learning outcomes management system	X	X	http://www.edumetry.com/index.html
eLumen Achievement Software	Rubric driven assessment system		X	www.elumen.info
LiveText	Comprehensive assessment system for students, faculty, administrators	X	X	http://college.livetext.com/college/index.html
LXR (Logic Extension Resources; a division of Applied Measurement Professionals)	developer of the LXR*TEST family of advanced assessment products; comprehensive item banking, test generation, extensive reporting and item analysis solutions for your testing program		X	http://www.lxr.com/default.htm
Nuventive	IWebfolio, TracDat	X	X	www.nuventive.com/products.tracdat.html

Company	Features/Products	Reporting	Conducting Assessment	Weblinks
Questionmark Perception	Test authoring software; innovative item formats/types		X	http://www.questionmark.com/us/perception/index.aspx
Sedona	Faculty database tool	X		http://www.educause.edu/apps/eq/eqm04/eqm0415.asp?bhcp=1
STEPS	Student tracking evaluation and portfolio system, The Student Tracking, Evaluation and Portfolio System (STEPS) is a student-built, faculty-led and administratively designed assessment system	X	X	http://www.cob.csuchico.edu/Centers_and_Academies/STEPS/index.html
TaskStream	Competency assessment and reporting, electronic portfolios	X	X	https://www.taskstream.com/pub/
Tk20	Course, Program, and Unit-level Assessment, Standards-based, Reflective, Electronic Portfolios; Tracking/Management of Field Experience & Clinical Practice; Data Aggregation from Student Information Systems; Report Generation for Comprehensive Analysis, and Accreditation Support; Survey, Document Room	X	X	www.tk20.com/home/index.html
True Outcomes (purchased by Thomson Publishing)	Professional Portfolio, Performance Assessment, Curriculum Record, Survey	X	X	www.trueoutcomes.com
Virginia Commonwealth University and Centrieva	WEAVE Online	X		www.weaveonline.net/welcome http://www.weaveonline.com/demo.asp